ferences is low, yet they may often be turned to good account in the discrimination of related species. The essential fibro-vascular system of the petiole, as displayed on a cross-section, forms either a closed ring or an arc open superiorly between the outer or cortical and the inner or medullary tissue; in the first case it is said to be closed or complete, in the second open or incomplete. Very commonly this is the only vascular system of the petiole, ribs, or veins. Not rarely there are additional or accessory bundles, sometimes external to the essential system, or *intracortical*; sometimes within the arc or ring, or *intramedullary;* occasionally there are both intracortical and intramedullary bundles. Generally plants of the same order will agree, at least approximately, in having the closed or open system, and in having or wanting the accessory bundles without or within. But, while *Acer Pseudo-platanus* has a well developed intramedullery cord, *A. platanoides* has none, and in general the Maples are divided in this respect quite independent of other characters; and the difference is similar and equally marked between the species of *Æsculus*. The oaks, which have been made a special study in this regard, appear to be somewhat equally divided between species provided with and those destitute of intramedullery bundles; but related species generally belong to the same category, yet not always. For in one case two species, of doubtful distinction until now, are confirmed by the discovery of an anatomical difference of this sort. All the Birches examined want the intracortical bundles and the principal system forms an open arc, and one or two Alders nearly agree with them; while the others have a closed ring and are furnished with intracortical bundles."

Notes from Colorado.—There seems to be much confusion about the two species of *Oxytropis* found on the plains. No. 73 of my Colorado collection, named by Dr. Gray *O. Lamberti*, is of interest because it is the "Loco" so dreaded by stock men for its poisonous properties. No. 14 is *O. campestris* and a full description of the two would show that they differ materially from the two species of Gray's Manual and the Synopsis in King's Report.

Malvastrum coccineum is poisonous. Mr. Ruble, a stock man of Pueblo, lost twelve hundred sheep in four hours from eating this plant, in October of this year. Specimens of the plant were sent me, which prove to be the above without any doubt. The Agricultural Department at Washington has received similar reports from other sources, on the poisonous properties of this plant.

Neillia opulifolia, Benth., seems to be distinguished from *N. Torreyi*, Watson, by its glabrous pods. I collected a large number of pods of *N. opulifolia* this season and find that those of the smaller forms are shining with scattered woolly hairs, but those of the large forms (four to six feet high), found on the plains at the base of the foot-hills, are woolly and the leaves are large, slightly lobed and crenate. I notice that the pubescence of both species is stellate under the microscope. The pedicels of both species are either slender and long or thick and short, and are often almost glabrous.

Grindelia squarrosa, Dunal, is occasionally rayless, with larger heads.

I have a few fronds of *Cryptogramme acrostichoides*, R. Br., fertile below and sterile above, after the manner of *Onoclea sensibilis*, var. *obtusilobata*.

Aquilegia chrysantha, Gray, seems hardly distinct from *A. cœrulea*, for the flowers are lavender often, sepals broadly ovate, broader than the petals; but with the small flowers and small leaves of *A. chrysantha* occasionally I have found both colors of flowers on different stems from the same root. The leaves are sometimes larger with the same small flowers, or small with much larger flowers. At Colorado Springs it is a low altitude plant, seldom reaching 7,500 feet. Similar observations were made by Rothrock of the Wheeler Survey.

Among the interesting plants collected by me in Colorado this season I notice the rare *Psoralea hypogæa*, Nutt., a *Helianthemum* apparently new but not in flower, *Ampelopsis quinquefolia*, Mx., with boat-shaped cucullate petals that do not fall as soon as they open, but remain for some time, and leaves with falcate tips, it may prove to be a good variety. Also *Astragalus Pattersoni*, Gray, a variety of *Potentilla Pennsylvanica*, L., not *strigosa;* erect, tall, leaflets pinnate, simply toothed, not revolute. Also *Asclepias Hallii*, Gray, *Suæda fruticosa*, var. (King's Rep.). *Smilax herbacea*, L., var. *inodora* seems sufficiently distinct to rank as a variety; scentless; seeds, three; leaves with five prominent ribs, the other two or four less prominent or reduced to irregular lines on the margin; leaves smooth on both sides except short white hairs on the reticulations beneath; otherwise as the typical form. The plant was collected June 18, 1879.

I have also quite a number of new Fungi already described in the GAZETTE.—MARCUS E. JONES.